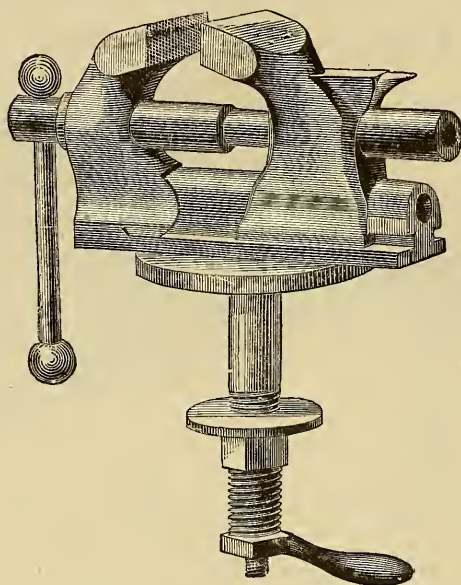


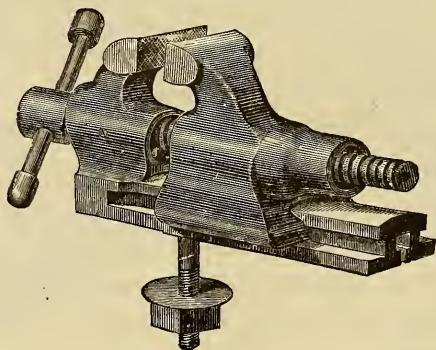
COMBINED UNION AND BACKUS VISES.



Heavy Chipping Vise, with Covered Screw.

Width of Jaw.....	1½	1¾	2	2½	3	3½	4	4½	5	6	7	in.
Weight	3½	5	9	22	39	47	56	67	75	116	169	lbs.
Without Iron Seat, \$	3.00	3.50	4.00	5.50	7.00	9.00	10.00	12.50	17.00	25.00	30.00	
With " " " " " "	3.50	4.00	4.50	6.25	8.00	10.00	11.25	14.00	18.75	27.00	No Seat.	

All Vises, except the 7 in., sent with Seats, unless otherwise ordered.

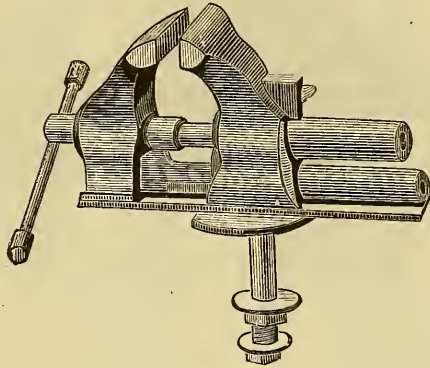


Heavy Chipping Vise, Uncovered Screw.

Jaws Length.....7 in. Weight.....169 pounds.

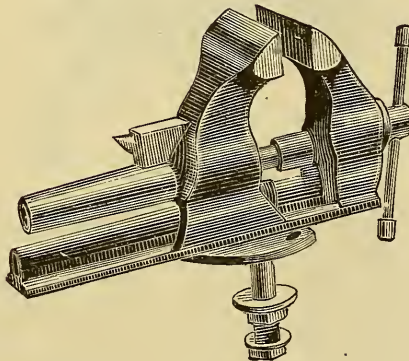
These 7-in. Vises are of the old Union Pattern. The demand for them has been very large, and we have never yet known one to fail of giving entire satisfaction.

COMBINED UNION AND BACKUS VISES.



Finishing Vise.

Width of Jaw.....	3	4	5	in.
Weight	24	42	60	pounds.
Without Iron Seat	\$6 50	\$9 00	\$14 50	
With "	7 00	10 25	16 25	

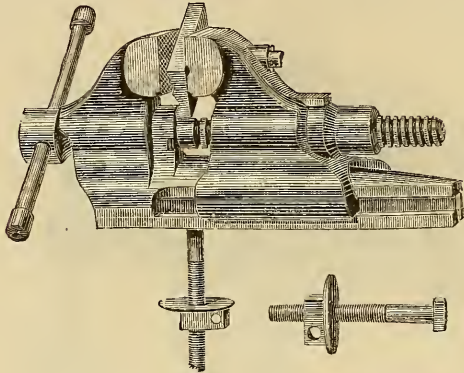


Coachmaker's Vise.

Without Iron Seat.....	\$10 00
With "	11 25

This Vise has Smooth Jaws, and are made especially for Coachmakers' use. The width of the Jaw is 4 in. depth of the Face of Jaw, 2 in. distance from the top of Jaw to the Screw. 5 in.; Jaws open, 11 in.; weight, 52 pounds.

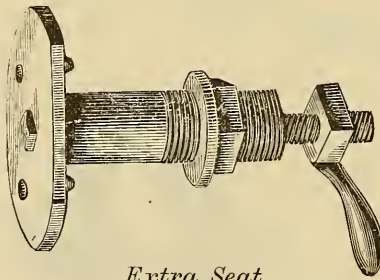
COMBINED UNION AND BACKUS VISES.



Pipe Vise.

Width of Jaw.....	4	5	8 in.
Weight	57	79	153 pounds.
Price	\$17 50	23 00	33 00

The 4 in. and 8 in. have covered Screws.



Extra Seat.

This Vise is constructed with a view of combining all the good qualities of the different Vises in use, with the peculiar advantages secured by the patents. It is a well made Vise, and easily adapted to different kinds of work. It is strong—the screw passing through the center instead of the bottom, and is entirely protected by a telescopic covering, which is the only means by which the screw can be covered without weakening the Vise, and still have the screw pass through the center. This Vise rests on a circular plate or seat of iron, having a hollow projection or hub long enough to reach through the bench, with a nut under the bench. The Vise is secured on this plate or seat by a bolt having a square head, fitting into a slot in the under side of the Vise, and passing through the plate or hub, with a hand nut on the lower end, which screws up firmly against the end of the hub. By loosening this nut the Vise may be turned on the seat to any desired angle, or may be moved backward or forward to accommodate the workman. By drawing the Vise forward to a certain point the head of the bolt will slip out of the slot, and the Vise may be moved from the bench to be used for holding the work on a planer, upright drill, or other machine; and it can be almost instantly restored to its place on the bench. The Vise is also furnished without the iron plate or seat, in which case it rests immediately on the bench, and is fastened by the bolt with the hand nut under the bench. The jaws are faced with hardened steel welded to the iron.